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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,914	03/23/2004	Masahiro Ikeda	0941.70144	3878

7590 11/01/2005

Patrick G. Burns, Esq.  
GREER, BURNS & CRAIN, LTD.  
Suite 2500  
300 South Wacker Dr.  
Chicago, IL 60606

EXAMINER
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NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/806,914

Applicant(s)

IKEDA ET AL.

Examiner

(Nancy) Thanh-Nhan P. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3 and 5-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 23 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This communication is responsive to Amendment dated 8/22/2005.
2. Claims 4 is cancelled; claims 9-14 are newly added. Currently, claims 1-3 & 5-14 are pending for the examination.

#### **Drawings**

Figures 1-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### **Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1, 2, 5-7 and 9-14 rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (admission) in view of Shimada et al U.S. Patent No. 5,910,829.**

**Referring to claims 1 & 2,** Admission discloses a liquid crystal display (LCD) panel, comprising a display area (202) for displaying images, and a frame area (204) that surrounds the display area, wherein the frame area comprises: a transparent substrate (206), a first electrode (210) that counters the color filters, a second electrode (216) that counters the first electrode, and liquid crystal that is inserted between the first electrode and the second electrode, [see fig. 6].

Admission lacks disclosure of wherein the first electrode and the second electrode are connected to a common voltage. However, it was inherently to have the first electrode and the second electrode are connected to a common voltage in liquid crystal display device to control the direction of the liquid crystal molecules.

Admission further lacks disclosure of the frame area comprises a plurality of color filters provided side-by-side on the transparent substrate, each of the color filters filtering one of at least two predetermined colors; wherein each of the color filters is one of red, green, and blue colors.

Shimada et al discloses in the frame area, a plurality of color filters provided side-by-side on the transparent substrate, each of the color filters filtering one of at least two predetermined colors; wherein each of the color filters is one of red, green, and blue colors, [see fig. 15], for the benefit of preventing the coloring of light through the light blocking layer from occurring, [see col. 20, lines 59-62]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a plurality of color filters provided side-by-side on the transparent substrate in the frame area, each of the color filters filtering one of at least two predetermined colors;

wherein each of the color filters is one of red, green, and blue colors for the benefit of preventing the coloring of light through the light blocking layer from occurring.

**Referring to claim 5**, Admission lacks disclosure of wherein thickness of the color filters in the frame area is equal to thickness of a plurality of color filters in the display area.

Shimada et al discloses wherein thickness of the color filters in the frame area is equal to thickness of a plurality of color filters in the display area, [see fig. 15], for the benefit of having no adverse effect due to the thickness variation which is present when the light blocking layer is formed of two layers of different colors, [col. 18, lines 55-57]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the thickness of the color filters in the frame area is equal to thickness of a plurality of color filters in the display area for the benefit of having no adverse effect due to the thickness variation which is present when the light blocking layer is formed of two layers of different colors.

**Referring to claim 6**, Admission discloses wherein a transparent protective coat is provided between the color filters and the first electrode, [see fig. 6].

**Referring to claim 7**, Admission discloses wherein a spacer member (222) for regulating the thickness of the LCD panel is provided in the frame area, [see fig. 6].

**The set of claims 9 & 11; 10 & 12** are met definition and therefore do not patentably distinguish the invention such that in claims 9 & 11, when the liquid crystal is normally white liquid crystal, a suitable driving voltage (such as applied voltage is greater or equal to the threshold voltage) is applied between the first and second

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electrodes such that the combined light passing through the color filter makes the frame area appear black; and such that in claims 10 & 12, when the liquid crystal is normally black liquid crystal, the voltage passed between the first and second electrode is kept below a threshold value such that the combined light passing through the color filters makes the frame area appear black. By definition, when the applied voltage is greater or equal to threshold voltage, the liquid crystal molecule direction is changing as comparing to its initial direction state; and when the applied voltage is less than threshold voltage, the liquid crystal molecule direction is staying the same as comparing to its initial direction state.

Claim 13 is met the discussion regarding claims 2 & 9 rejection above.

Claim 14 is met the discussion regarding claims 2 & 10 rejection above.

**Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (admission) in view of Shimada et al as discussed above, and further in view of Ono et al U.S. Patent Application Publication No. 2005/0083471.**

**Referring to claim 3,** Admission lacks disclosure of the liquid crystal is normally black liquid crystal.

Ono et al discloses by adopting a so-called normally black liquid crystal, which can generate a black display in a state in which an electric field is not applied to the liquid crystal, it is possible to strengthen the function of the conductive layer as a black matrix, [see par. 0204]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use normally black liquid crystal

for the benefit of being possible to strengthen the function of the conductive layer (such as electrodes) as a black matrix.

**Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (admission) in view of Shimada et al as discussed above, and further in view of Matsuoka et al U.S. Patent No. 6,348,958.**

**Referring to claim 8,** Admission lacks disclosure of an area occupancy ratio of the color filters in one color is different from an area occupancy ratio of the color filters in another color.

Matsuoka et al discloses an area occupancy ratio of the color filters in one color is different from an area occupancy ratio of the color filters in another color, [fig. 1], for the benefit of being possible to omit the step of manufacturing a black mask so as to reduce the cost; and consequently, a color filter for an optical display device can be provided with an excellent appearance on a display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an area occupancy ratio of the color filters in one color is different from an area occupancy ratio of the color filters in another color for the benefit of being possible to omit the step of manufacturing a black mask so as to reduce the cost; and consequently, a color filter for an optical display device can be provided with an excellent appearance on a display.

### **Response to Arguments**

Applicant's arguments, filed 8/22/2005, with respect to the rejection(s) of claim(s) 4 under 35 U.S.C 103(a) have been fully considered and are persuasive. Therefore, the

rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Admission, Shimada et al & Ono et al.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shimada et al U.S. Patent No. 5,910,829.

Ono et al U.S. Patent Application Publication No. 2005/0083471.

Matsuoka et al U.S. Patent No. 6,348,958.

**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

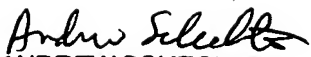


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(Nancy) Thanh-Nhan P Nguyen  
Examiner  
Art Unit 2871  
-- October 24, 2005 --

TN

  
ANDREW SCHECHTER  
PRIMARY EXAMINER